

Attorney Docket No.: A-68392-2/DJB/RMS/DCF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:) Examiner: Not Yet Assigned
DICKINSON, et al.) Group Art Unit: 2874
Serial No. 09/651,181)) -
Filed: August 30, 2000	
For: METHODS FOR IMPROVING SIGNAL DETECTION FROM AN ARRAY	SO SET ROOM

CERTIFICATE OF MAILING

I hereby certify that this correspondence, including listed enclosures, is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on:

Dated:

Signad

Christine P. Peter

INFORMATION DISCLOSURE STATEMENT AND STATEMENT OF RELATEDNESS

Assistant Commissioner for Patents Washington, DC 20231

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicant wishes to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form PTO-1449. Copies of the references are enclosed.

Serial No.: 09/651,181 Filed: August 30, 2000

With respect to patent applications, the applicants point out their duty under M.P.E.P. §2001.06(b) to disclose relevant patent applications of which they are aware. To this end, the applicants draw the Examiner's attention to the following patent applications:

- United States Serial Number 08/944,850, filed October 6, 1997 and U.S.S.N.
 09/287,573, filed April 6, 1999.
- United States Patent Number 6,023,540, issued February 8, 2000; U.S.S.N.
 09/151,877, filed September 11, 1998 and U.S.S.N. 09/450,829, filed November 29, 1999.
- 3. U.S.S.N. 09/189,543, filed November 10, 1998; U.S.S.N. 09/344,526, filed June 24, 19996 and U.S.S.N. 09/748,706, filed December 22, 2000.
- U.S.S.N. 09/500,555, filed February 9, 2000 and U.S.S.N. 09/636,387, filed
 August 9, 2000.

None of the foregoing references are believed to disclose the invention as claimed.

Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

Serial No.: 09/651,181 **Filed**: August 30, 2000

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-68392-2/DJB/RMS/DCF).

Respectfully submitted,

FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT

Dated: March 23, 2001

David C. Foster Reg. No. 44,685

Four Embarcadero Center Suite 3400 San Francisco, CA 94111-4187 Telephone: (415) 781-1989 1046979

OIP	K 50		•			•	•	SHEET <u>1</u> OF <u>5</u>
INFORMATION DISCLOSURE					ATTY. DOCKET NO. A-68392-2/DJB/RMS/DC	SEI OF 09/	RIAL NO. 651,181	WI have 7 in the control of the cont
INFORMATION DISCLOSURE CITATION PTO-1449				APPLICANT DICKINSON et al.				
					FILING DATE GROUP August 30, 2000 2874			
				A. L. STATE	(b) (2011) (b) (b) (b) (b)			
EXAMINER'S INITIALS		PATENT NO.	DATE		NAME	CLASS	SUBCLASS	FILING DATE
	l	4,822,746	4/1989	Walt				
	2	5,002,867	3/1991	Macevicz				
	3	5,114,864	5/1992	Walt				
·	4	5,105,305	4/1992	Betzig et al.				
	5	5,143,853	9/1992	Walt				
	6	5,028,545	7/1991	Soini				
	7	5,244,636	9/1993	Walt et al.			1	
	8	5,244,813	9/1993	Walt et al.				
	9	5,250,264	10/1993	Walt et al.			1	
	10	5,252,494	10/1993	Walt				
	11	5,254,477	10/1993	Walt				
-	12	5,298,741	3/1994	Walt et al.			1	
	13	5,320,814	6/1994	Walt et al.				
,	14	5,496,997	3/1996	Pope				
	, 15	5,512,490	4/1996	Walt et al.				
	16	5,573,909	11/1996	Singer et al.				
	17	5,633,972	5/1997	Walt et al.				
	18	4,499,052	2/1985	Fulwyler				,
	19	5,690,894	11/1997	Pinkel et al.				
	20	5,194,300	3/1993	Cheung				
	21	5,132,242	7/1992	Cheung				
	धा हरू हुन					4	t a	
EXAMINER					ATE CONCIDENCE			
EXAMINER				107	ATE CONSIDERED			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SHEET 2 OF 5 ATTY. DOCKET NO. SERIAL NO. INFORMATION DISCLOSURE A-68392-2/DJB/RMS/DCF 09/651,181 APPLICANT **CITATION** DICKINSON et al. **GROUP FILING DATE** PTO-1449 August 30, 2000 2874 Page Mile **EXAMINER'S** FILING DATE CLASS INITIALS PATENT NO. DATE SUBCLASS 4/1980 22 4,200,110 Peterson et al. 23 4/1989 4,824,789 Yafuso et al. 24 4,682,895 7/1987 Costello 25 11/1988 Kane 4,785,814 5/1996 26 5,518,883 Soini 27 4,999,306 3/1991 Yafuso et al. 28 5,302,509 4/1994 Cheeseman 10/1994 29 5,357,590 Auracher 7/1995 Goodman et al. 30 5,435,724 1/1996 Tabuchi 31 5,481,629 11/1996 32 5,575,849 Honda et al. 6/1997 33 5,639,603 Dower et al. 8/1997 Seifert et al. 34 5,656,241 35 5,814,524 10/1998 36 5,863,708 1/1999 Zanzucchi et al. 2/1996 Gerdt et al. 37 5,494,798 38 5,565,324 10/1996 Still et al. 39 5,516,635 5/1996 Ekins et al. 40 5,900,481 5/1999 Lough et al. 3/1999 Sutton et al. 41 5,888,723 42 5,380,489 1/1995 Sutton et al. 43 5,474,895 12/1995 Ishii et al. **EXAMINER** DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

MAR 2 9 2801 55

SHEET 3 OF 5

INFORMATION DISCLOSURE CITATION

PTO-1449

ATTY. DOCKET NO. A-68392-2/DJB/RMS/DCF

SERIAL NO. 09/651,181

APPLICANT DICKINSON et al.

FILING DATE August 30, 2000 GROUP 2874

			4.01	图16 mm 12 m				
EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING	DATE
•								1017
			के के का अधि	१ अतिकार हाल्सुमानावित्रेह			· · · · · · · ·	77.
EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Tranel Yes	ation No
	44	0 478 319	4/1992	EP				
	45	0 269 764	6/1988	EP				
	46	93/02360	2/1993	PCT				
,	47	89/11101	11/1989	PCT				
•	48	97/14028	4/1997	PCT				
	49	0 723 146	7/1996	ЕР				
	50	98/40726	9/1998	PCT				
	51	0 392 546	10/1990	EP				
	52	98/53093	11/1998	PCT				
	53	97/40385	10/1997	PCT				
	54	98/53300	11/1998	PCT				
	55	00/04372	1/2000	PCT				
	56	99/67641	12/1999	PCT				
	57	00/39587	7/2000	PCT				
	58	00/71243	11/2000	PCT				
EV A BAILES				In the contract of				
EXAMINER				DATE CONSIDERED				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SHEET 4 OF 5 ATTY. DOCKET NO. SERIAL NO. A-68392-2/DJB/RMS/DCF 09/651.181 ATION DISCLOSURE **APPLICANT CITATION** DICKINSON et al. FILING DATE **GROUP** PTO-1449 August 30, 2000 2874 EXAMINER'S FILING DATE INITIALS PATENT NO. DATE CLASS SUBCLASS 工學也 域的 多斯爾 随后的命令 **EXAMINER'S** Translation INITIALS PATENT NO. DATE COUNTRY CLASS SUBCLASS Yes No 59 97/14928 4/1997 **PCT** 60 99/18434 4/1999 **PCT** 61 99/67414 12/1999 PCT 62 00/48000 9/2000 **PCT** 63 00/39587 7/2000 **PCT** 00/16101 3/2000 **PCT** 65 00/63437 10/2000 **PCT** 00/75373 12/2000 PCT 66 00/71995 11/2000 **PCT** 67 68 00/47996 8/2000 PCT 1 र विविद्या है। विविद्या के अविद्यालया कि विविद्या का विविद्या कर विविद्या के विविद्या के विविद्या के विविद्या Ferguson et al., "A Fiber-Optic DNA Biosensor Microarray for the Analysis of Gene Expression," Nature Biotechnology, 14:1681-1684 (1996). 70 Healey et al., "Improved Fiber-Optic Chemical Sensor for Penicillin," Anal. Chem. 67(24):4471-4476 (1995). Healey et al., "Development of a Penicillin Biosensor Using a Single Optical Imaging Fiber," SPIE Proc. 2388:568-71 72 Michael et al., "Making Sensors out of Disarray: Optical Sensor Microarrays," Proc. SPIE, 3270: 34-41 (1998). Michael et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays," Anal. Chem. 70(7): 1242-1248 73 Michael et al., "Fabrication of Micro- and Nanostructures Using Optical Imaging Fibers and there Use as Chemical 74 Sensors," Proc. 3rd Intl. Symp., Microstructures and Microfabricated Systems, ed. P.J. Hesketh, et al., v. 97-5, Electrochem. Soc., 152-157 (Aug. 1997). Pantano et al., "Ordered Nanowell Arrays," Chem. Mater., 8(12): 2832-2835 (1996). 75 Walt, "Fiber-Optic Sensors for Continuous Clinical Monitoring," Proc. IEEE, 80(6): 903-911 (1992). 76 **EXAMINER** DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 8085 1449A.FRM (8/95)

OIPE (SHEET 5 of 5								
INFO			ATTY. DOCKET NO. A-68392-2/DJB/RMS/DCF	SERIAL NO. 09/651,181				
INFU	i ` tiVI⊁	ATION DISCLOSURE	APPLICANT DICKINSON et al.					
		PTO-1449	FILING DATE August 30, 2000	GROUP 2874				
		ा भागांक मालाविक्षा प्रशासीका	South Bur Steel Louis					
	77	Anonymous, "Fluorescent Microspheres,"						
	78	Anonymous, "Microsphere Selection Guid	de," Bangs Laboratories, (Fishe	er, In) September 1998.				
	79							
	80	Peterson, J. et al., "Fiber Optic pH Probe for						
:	81	Pope, E. "Fiber Optic Chemical Microsensors Employing Optically Active Silica Microspehres," SPIE, 2388:245-256 (1995).						
•	82	Strachan et al., "A Rapid General Method for the Identification of PCR Products Using a Fibre-Optic Biosensor and its Application to the Detection of Listeria," Letters in Applied Microbiology, 21:5-9 (1995).						
	83	Abel et al., "Fiber-Optic Evanescent Wave Biosensor for the Detection of Oligonucleotides," Anal. Chem. 68:2905-2912 (1996).						
	84	Piunno et al., "Fiber-Optic DNA Sensor for Fluorometric Nucleic Acid Determination," Anal. Chem., 67:2635-2643 (1995).						
	85	Drmanac, R. et al., "Sequencing by Oligonucleotide Hybridization: A Promising Framework in Decoding of the Genome Program," The First International Conference on Electrophoresis, Supercomputing and the Human Genome, Proceeding of the April 10-13, 1990 Conference at Florida State University. Ed. C. Cantor and H. Lim.						
	86	Drmanac, R. et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project," Scientia Yugoslavica, 16(1-2):97-107 (1990).						
3	87	Drmanac, R. et al., "Sequencing by Hybridization (SBH) with Oligonucleotide Probes as an Integral Approach for the Analysis of Complex Genomes," International Journal of Genome Research, 1(1):59-79 (1992).						
	88	Drmanac, R. et al., "Sequencing by Hybridization," Automated DNA Sequencing and Analysis, ed. M. Adams, C. Fields and J. Venter. (1994).						
	89	Barnard et al., "A Fibre-Optic Chemical Sensor with Discrete Sensing Sites," Nature, 353:338-340 (September 1991).						
	90	Fuh et al., "Single Fibre Optic Fluorescence pH Probe," Analyst, 112:1159-1163 (1987).						
	. 91	Magnani et al., "In-Vivo Biomedical Monitoring by Fiber-Optic Systems," Journal of Lightwave Technology, 13(7):1396-1406 (1995).						
	. 92	Healey et al., "Fiberoptic DNA Sensor Array Capable of Detecting Point Mutations," Analytical Biochemistry, 251:270-279 (1997)						
	93	Hirschfeld et al., "Laser-Fiber-Optic 'Optrode' for Real Time In Vivo Blood Carbon Dioxide Level Monitoring," Journal of Lightwave Technology, LT-5(7):1027-1033 (1987)						
	94	Peterson et al., "Fiber-Optic Sensors for Bie						
	95	Czarnik, "Illuminating the SNP genomic co						
	96	Walt, "Fiber Optic Imaging Sensors", Acc.	Chem. Res. 31(5):267-278 (1	.998)				
	igspace							
1	()	1						

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED

EXAMINER